

LABOUR FORCE PROJECTIONS
NEWFOUNDLAND AND LABRADOR
1986 - 2000

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INTRODUCTION

This paper contains projections of the Newfoundland labour force to the year 2000 based on various participation rate and population growth assumptions.

The population projections are taken from the optimistic, present trends and most likely projections given in "Population Projections, Newfoundland and Labrador, 1983-2005" Newfoundland Statistics Agency. The participation rate assumptions take into account the different rates for the various age and sex groupings.

LABOUR FORCE GROWTH

The labour force is composed of two components: those persons who are employed and those persons who are unemployed¹. Growth in the labour force can be a result of growth of either the employed, the unemployed or both. As the population of labour force age (15 years and older) grows we would normally expect the labour force to grow.

The labour force in Newfoundland has grown in most years since 1975. In the seventies most of this growth came from persons finding employment. In 1982 there was a loss of employment (from 179,000 in 1981 to 174,000 in 1982) and since then the labour force growth has been mainly a result of a growing number of unemployed.

Since 1975 the labour force in Newfoundland has increased by 45,000, or 5,000 a year, from 176,000 to 221,000 (Table I). Most of this growth, 31,000, has been as a result of an increasing number of women entering the labour force. Their numbers have risen from 55,000 in 1975 to 86,000 in 1984. While the male labour force has grown from 121,000 to 135,000 the growth in comparison to the growth in the female labour force is small.

1 - See Appendix A for Labour Force Survey definitions of employed and unemployed.

Table I
Labour Force by Sex
Newfoundland
1975 to 1984

	<u>Total</u>		<u>Male</u>		<u>Female</u>	
	<u>Number</u>	<u>Growth</u>	<u>Number</u>	<u>Growth</u>	<u>Number</u>	<u>Growth</u>
			(000)			
1975	176		121		55	
1976	181	5	123	2	58	3
1977	188	7	125	2	63	5
1978	194	6	127	2	67	4
1979	200	6	131	4	68	1
1980	205	5	132	1	73	5
1981	208	3	132	0	76	3
1982	209	1	130	-2	79	3
1983	214	5	134	4	80	1
1984	221	7	135	1	86	6
1975-1984		45		14		31

PARTICIPATION RATE

Since 1975 the Newfoundland participation rate¹ has increased from 49.4% to 52.9% with almost all of the increase occurring from 1976 to 1980 (Table II). This growth is similar to what occurred in Canada during the same period. This means that the gap between the National and Provincial Rates of 11.7 percentage points in 1975 has remained almost unchanged nine years later.

Table II
Total Participation Rate, Newfoundland & Canada
1975 to 1984

	<u>Newfoundland</u>	<u>Canada</u>	<u>Canada - Newfoundland</u>
1975	49.4	61.1	11.7
1976	49.4	61.1	11.7
1977	50.6	61.6	11.0
1978	51.5	62.7	11.2
1979	62.3	63.4	11.1
1980	52.7	64.1	11.4
1981	52.6	64.8	12.2
1982	52.1	64.1	12.0
1983	52.1	64.4	12.3
1984	52.9	64.8	11.9
Increase 1975 to 1984	3.5	3.7	

Source: Statistics Canada, 71-001, 71-527.

1 - Labour Force as a percentage of the population 15+

While there has been growth in the total participation rate for Newfoundland the growth in the male and female participation rates (Table III) have not been the same. All of the growth for the period 1975 to 1984 can be attributed to an increasing number of females entering the labour force. The female participation rate in Newfoundland has increased by 10 percentage points from 31% to 41%. Even with this strong growth of 1 percentage point a year the participation rate has not changed relative to the Canadian female rate and is still in the same position as 1975, 13 percentage points lower. The gap between the Newfoundland female and male participation rates has narrowed from 36 percentage points in 1975 (31:67) to 24 percentage points in 1984 (41:65).

Table III
Participation Rates by Sex
Newfoundland & Canada
1975 to 1984

	Male			Female		
	<u>Nfld.</u>	<u>Canada</u>	<u>Canada - Nfld.</u>	<u>Nfld.</u>	<u>Canada</u>	<u>Canada - Nfld.</u>
1975	67.1	78.4	11.3	31.2	44.4	13.2
1976	66.6	77.6	11.0	31.8	45.2	13.4
1977	66.8	77.7	10.9	34.1	46.0	11.9
1978	67.3	78.1	10.8	35.5	47.9	12.4
1979	68.5	78.5	10.0	35.9	49.0	13.1
1980	67.7	78.4	10.7	37.6	50.4	12.8
1981	67.0	78.4	11.4	38.2	51.7	13.5
1982	65.0	77.0	12.0	39.2	51.7	12.5
1983	65.4	76.7	11.3	39.0	52.6	13.6
1984	65.0	76.6	11.6	41.0	53.5	12.5
Increase						
1975 to 1984	-2.1	-1.8		9.8	9.1	

Source: Statistics Canada 71-001, 71-529.

The Newfoundland male participation rate did grow from 1975 to 1979 when it peaked at 68.5%. Since that time the male rate slipped to 65% and has remained at that level for the past three years. As with the female participation rate the difference between the Canadian and Newfoundland rate has remained relatively unchanged over the period.

POPULATION

Since Confederation the population has grown from 361,000 to 580,000 in 1985 but the rate of growth has been slowing. The greatest growth was from 1956 to 1961, 65,000 for an annual growth of 2.8% a year. The average annual increase of over 10,000 a year in this period was higher than the growth experienced in the full five year period from 1976 to 1981. The following table shows the total population by five year intervals from 1951 to 1981 with an estimate for 1985.

Table IV
Number and Increase of Population,
Newfoundland and Labrador,
1951 to 1985

<u>Year</u>	<u>Number</u>	<u>Increase</u>	<u>Compound</u> <u>Annual</u> <u>Growth Rate</u>
	(000)		(%)
1951	361		
1956	415	54	2.8
1961	458	43	2.0
1966	493	35	1.5
1971	522	29	1.1
1976	558	36	1.3
1981	568	10	0.4
1985	580	12	0.5

Source: Census of Canada and Statistics
Canada 91-201.

The declining population growth in the last twenty-five years has been largely a result of declining births and a continuing high out-migration (Table V).

Table V
Average Annual Increase per Five Year Period,
Births, Deaths, Natural Increase and Net Migration

<u>Year</u>	<u>Average Annual Change</u>				<u>Growth in Population</u>
	<u>Births</u>	<u>Deaths</u>	<u>Natural Increase</u> ¹	<u>Net Migration</u> ²	
1961-66	15,000	3,100	11,900	-4,800	7,100
1966-71	13,000	3,100	9,800	-4,100	5,700
1971-76	11,900	3,300	8,600	-1,500	7,100
1976-81	10,900	3,200	7,700	-5,700	2,000

1 - Natural Increase = Births - Deaths.

2 - Net Migration = In-migration - out-migration. A minus number indicates a loss of population.

Source: Vital Statistics; Census of Canada.

The growth in the population 15+, those of labour force age, has also slowed somewhat but not as dramatically as the growth in the total population, Table VI. Whereas the total population is estimated to be increasing at 3,000 a year from 1981 to 1985 the population 15+ is increasing at approximately 6,000 a year.

Table VI
Number and Increase of Population 15+
Newfoundland and Labrador
1966 to 1985

<u>Year</u>	<u>Population 15+ (000)</u>	<u>Increase</u>	<u>Compound Annual Growth Rate (%)</u>
1966	292		
1971	327	35	2.3
1976	366	39	2.3
1981	395	29	1.5
1985	422	27	1.7

This apparent anomaly of the population 15+ increasing more than the total population (from 1976 to 1981, increase of 29,000 versus 10,000) is due to the declining number of births. This changing age structure can be seen by examining the age-sex pyramid in Appendix B.

The three population projections used in the report are from "Population Projections, Newfoundland and Labrador, 1983 - 2005", Newfoundland Statistics Agency. They are based on the following assumptions.

<u>Projection</u>	<u>Fertility</u>	<u>Net Migration/Year</u>			
		<u>83-84</u>	<u>84-85</u>	<u>95-96</u>	<u>2004-05</u>
			(000)		
"Present Levels"	Constant at 1.93*	-2	-4	-4	-4
"Most Likely"	Constant at 1.93	-2	-4	-2	-2
"Optimistic"	Constant at 1.93	-2	-4	0	0

* Replacement is considered to be 2.1.

The fertility rate assumption has very little impact on the labour force to the year 2000 since almost all of the persons of labour force age in that year are already born. The net migration though does have an impact on the persons of labour force age. Under the "present levels" projection based on a net out-migration of 4,000 each year the population of labour force age in 2000 is 468,000. This compares to 486,000 under the "most likely" projection and 504,000 under the "optimistic" projection.

The following table gives the total population and the population 15 years and older for each of these projections at five year intervals.

Table VII
Population and Population 15+
Newfoundland
1985 to 2000

<u>Year</u>	<u>Population</u>			<u>Population 15+</u>		
	<u>Present</u>	<u>Most Likely</u>	<u>Optimistic</u>	<u>Present</u>	<u>Most Likely</u>	<u>Optimistic</u>
			(000)			
1985 ¹	580	580	580	422	422	422
1990	597	600	603	449	452	454
1995	605	616	627	461	469	477
2000	607	630	653	468	486	504

1 - Population Estimates, Statistics Canada.

METHODOLOGY

The labour force can be determined from the participation rate and the population 15 years and older in any given year. In this exercise it was decided to make the projections of the labour force by age and sex groups. This decision was made because age and sex groupings have different participation rates and the age structure of the population will be changing over the next twenty years. We already know that there will be more people in fifteen years time in the age group 65 and over and fewer persons aged 15 to 24 years. As well the participation rates for some age and sex groups have been growing quite rapidly

while for other groups the growth has been slow. This methodology also has the advantage of providing the labour force by age and sex groups.

The age groups chosen for males and for females were: 15-24, 25-34, 35-44, 45-54, 55-64 and 65+. These groups were chosen based on the availability of participation rates from the Labour Force Survey.

Initial runs were made using the 1984 participation rate for all years for 1985 to 2000. Later runs were compared to this base case to get an impression of the impact of changing the participation rates from present levels. In later runs the participation rates were allowed to grow towards the Canadian participation rate in the case of males and towards the Newfoundland male participation rate in the case of females. This gave an upper limit for the growth by age and sex groups. The Newfoundland male rate was chosen rather than the Canadian female rate in the case of Newfoundland females because of the rapid growth occurring from the mid-seventies to the mid-eighties in both the Newfoundland and Canadian female participation rates. Though the growth was high the gap between the two rates has been relatively constant. The Newfoundland male participation rate is higher than the Canadian female participation so this gave a higher upper limit as well as allowing the differences in the Newfoundland labour force such as seasonality to be taken into account.

The calculations used in arriving at the participation rates are given in Appendix C.

RESULTS

If the participation rates are left constant at 1984 levels, the labour force increase from 1985 to 1990 slows to approximately 3,000 a year under each of the three population assumptions (Table VIII). After that time the labour force projections diverge and by the year 2000 the projections range from 247,000 to 268,000 depending on whether one takes the "present levels" or "optimistic" population projection.

These estimates are likely to be too low since the participation rate for females has been increasing at approximately 1 percentage point a year over the past ten years.

Table VIII
Base Case¹

Labour Force (000)										
Year	Present			Most Likely			Optimistic			P.R. ³
	Level	Total	Growth ² Annual	Level	Total	Growth ² Annual	Level	Total	Growth ² Annual	
1985	224			224			224			53
1990	238	14	2.8	239	15	3.0	241	17	3.4	53
1995	244	6	1.1	250	11	2.2	254	13	2.6	53
2000	247	3	0.6	258	8	1.8	268	14	2.8	53

1 - 1984 Participation rates.

2 - Growth for each 5 year period.

3 - P.R. = Participation Rate.

In order to determine the impact of the increasing female participation rate the male rate was left constant at the 1984 rates and the female allowed to increase at approximately 1 percentage point a year.

Under this assumption the labour force continues to grow at approximately 6,000 a year for the next five years and then slows for the "present levels" and "most likely" population projections but continues at approximately 6,000 a year under the "optimistic" population projection.

Table IX

Labour Force (000)

Year	Present				Most Likely				Optimistic			
	Level	Change		P.R.*	Level	Change		P.R.*	Level	Change		P.R.*
		Total	Annual			Total	Annual			Total	Annual	
1985	224			53	224			53	224			53
1990	252	28	5.6	56	253	29	5.8	56	254	30	6.0	56
1995	273	21	4.2	59	279	26	5.2	60	284	30	6.0	60
2000	292	20	4.0	62	305	25	5.0	63	317	33	6.6	63

1. Male Participation Rate Constant at 1984 Level.

2. Female Participation Rate increasing to Newfoundland Male Participation Rate over 20 years.

* - P.R. = Participation Rate.

As well a projection was made increasing the male and female participation rate to the Canadian 1984 rates over the next 20 years and it gave very similar results to the above projection. Under these assumptions the growth in the female participation rate is .6 of a percentage point a year versus the rate of almost 1 percentage point a year, when the female rate is allowed to grow to the Newfoundland male rate. The lower growth of the female rate balances out the increase in the male participation rate.

Based on the results of these runs, three runs were chosen to represent high, medium and low labour force projections.

The low projection uses the "present level" population projection combined with a fixed male participation rate and a slowly increasing female participation rate.

The medium projection combines the "most likely" population projection with a male participation rate increasing marginally over the next ten years and an increasing female participation rate.

The high projection combines the "optimistic" population projection with a male participation rate increasing over the coming years with a high increase in the female participation rate.

Assumptions for Low, Medium & High
Labour Force Projections

<u>Projection</u>	<u>Population Projection</u>		<u>Participation Rate</u>		
			<u>1990</u>	<u>1995</u>	<u>2000</u>
Low	"Present Levels"	Total	55	56	57
		Male	66	66	66
		Female	45	47	48
Medium	"Most Likely"	Total	56	59	60
		Male	67	69	69
		Female	45	49	52
High	"Optimistic"	Total	57	62	64
		Male	70	74	74
		Female	45	50	54

These assumptions give three labour force projections which by the year 1990 range from a low of 247,000 to a high of 259,000 with the overall participation rates ranging from 55% to 57% versus 53% in 1985 (Table X).

Table X
Low, Medium & High Labour Force Projections

Year	Labour Force (000)											
	Low				Medium				High			
	Level	Growth		P.R.*	Level	Growth		P.R.*	Level	Growth		P.R.*
		Total	Annual			Total	Annual			Total	Annual	
1985	224			53	224			53	224			53
1990	247	23	4.6	55	252	28	5.6	56	259	35	7.0	57
1995	259	12	2.4	56	275	23	4.6	59	294	35	7.0	62
2000	266	7	1.4	57	292	17	3.4	60	322	28	5.6	64

* P.R. = Participation Rate.

The medium projection, which we recommend at this time, shows the labour force growing by 28,000 over the next five years, or on average around 5,500 a year. This is close to the average of 5,000 a year from 1976 to 1984. After that time the growth slows to approximately 4,500 a year from 1990 to 1995 and then to 3,500 a year from 1995 to 2000.

If we compare this labour force projection to the base case with fixed participation rates (Table VII) we see that to 1995 roughly half the growth is due to population growth and roughly half to increasing participation rate. From 1990 to 1995 the population increase is accountable for more of the growth because of the slowing rate of increase in the participation rate. From 1995 to 2000 the growth once again comes equally from population growth and participation rate increase.

Growth in Labour Force Under
Medium & Base Case Participation Rates

Year	Labour Force Growth ¹		
	Medium	Base Case ² (000)	Difference ³
1990	28	15	13
1995	23	15	8
2000	17	9	8

1 - Growth from 1985.

2 - 1984 Participation Rate with "Most Likely" population projection.

3 - Attributable to increasing participation rates.

Tables giving the labour force by age and sex from 1986 to 2000 are given in Appendix E for the low, medium and high projections. As well tables giving the participation rates for these projections are given in Appendix F.

These labour force projections are quite sensitive to changes in both the population projections and the participation rates used as the time frame lengthens. To the year 1990 the labour force projections are reasonably close but after this time they diverge. Therefore they should be treated with skepticism at ten years and with even greater skepticism at fifteen years.

These projections will be revised at regular intervals as further information on population and labour force trends become available.

APPENDIX A

Definitions and Explanations

Labour Force

The labour force is composed of that portion of the civilian non-institutional population 15 years of age and over who, during the reference week, were employed or unemployed.

Employed

Employed persons are those who, during the reference week:

- (a) did any work¹ at all;
- (b) had a job but were not at work due to:
 - own illness or disability;
 - personal or family responsibilities;
 - bad weather;
 - labour dispute;
 - vacation;
 - other reason not specified above (excluding persons on layoff and persons whose job attachment was to a job to start at a definite date in the future).

Unemployed

Unemployed persons are those who, during the reference week:

- (a) where without work, had actively looked for work in the past four weeks (ending with reference week), and were available² for work;
- (b) had not actively looked for work in the past four weeks but had been on layoff³ and were available for work;

(Appendix A cont'd)

- (c) had not actively looked for work in the past four weeks but had a new job to start in four weeks or less from reference week, and were available for work.

Not in the Labour Force

Those persons in the civil institutional population 15 years of age and over, during the reference week were neither employed nor unemployed.

Unemployment Rate

The unemployment rate represents the number of unemployed persons expressed as a per cent of the labour force. The unemployment rate for a particular group (age, sex, marital status, etc.) is the number unemployed in that group expressed as a per cent of the labour force for that group.

Participation Rate

The participation rate represents the labour force expressed as a percentage of the population 15 years of age and over. The participation rate for a particular group (age, sex, marital status, etc.) is the labour force in that group expressed as a percentage of the population for that group.

(Appendix A cont'd)

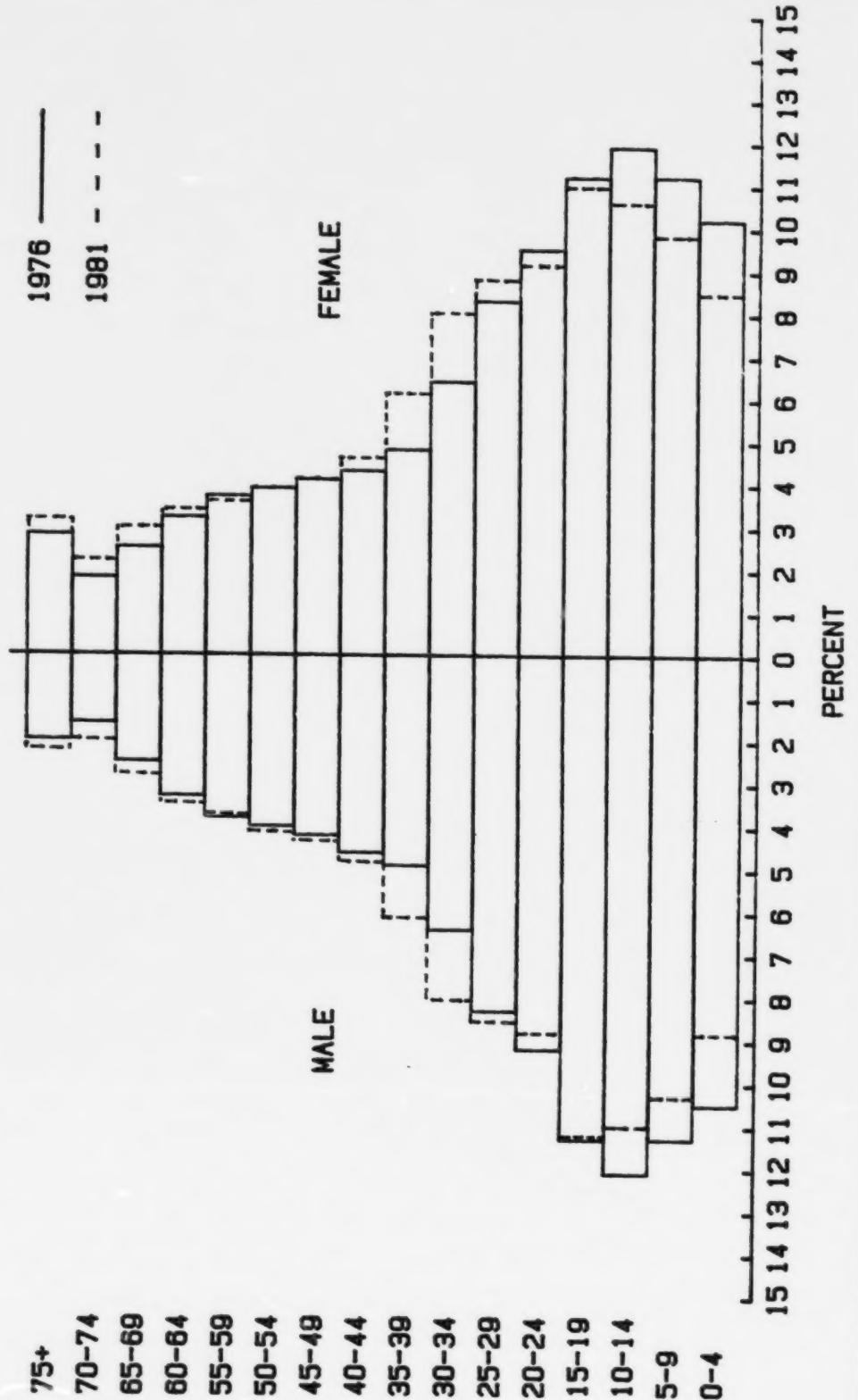
Footnotes:

- 1 - Work includes any work for pay or profit, that is, paid work in the context of an employer-employee relationship, or self-employment. It also includes unpaid family work where unpaid family work is defined as unpaid work which contributed directly to the operation of a farm, business or professional practice owned and operated by a related member of the household.
- 2 - Persons in this group meeting the following criteria are regarded as available:
 - (i) were full-time students seeking part-time work who also met condition (ii) below. (Full-time students looking for full-time work are classified as not available for work in the reference week.)
 - (ii) reported that there was no reason why they could not take a job in reference week, or if they could not take a job it was because of "own illness or disability", "personal or family responsibilities", or "already had a job".
- 3 - Persons are classified as being on layoff only when they expect to return to the job from which they were laid off.

Source: The Labour Force, Statistics Canada 71-001.

APPENDIX B

PERCENTAGE DISTRIBUTION OF THE POPULATION
BY AGE GROUP AND SEX
NEWFOUNDLAND



APPENDIX C

Calculation of Participation Rate

In determining the Newfoundland female participation rate the Newfoundland male rate was used as a control. The calculation performed for age and sex groups was:

$$NFPR(n) = NFPR(84) + \sum_{i=1}^n \frac{(NMPR(84) - NFPR(84))}{20} \times F_i$$

where:

NFPR(n) - Newfoundland Female Participation Rate in the n^{th} . year;

NFPR(84) - Newfoundland Female Participation Rate in 1984;

NMPR(84) - Newfoundland Male Participation Rate in 1984;

$F_i = 0$ to 1 dependency on rate of growth required.

For the male participation the Canadian male participation rate was used as a control with a similar calculation:

$$NMPR(n) = NMPR(84) + \sum_{i=1}^n \frac{(CMPR(84) - NMPR(84))}{10} \times F_i$$

where:

NMPR(n) - Newfoundland male participation rate in the n^{th} . year;

NMPR(84) - Newfoundland male participation rate in 1984;

CMPR(84) - Canadian male participation rate in 1984;

$F_i = 0$ to 1 depending on rate of growth required.

The F_i used for low, medium and high are given in the following table.

(Appendix C cont'd)

<u>Year</u>	<u>Low</u>		<u>Medium</u>		<u>High</u>	
	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>
1986	.75	0	.75	.20	.75	.70
1987	.70	0	.75	.20	.75	.70
1988	.65	0	.75	.20	.75	.70
1989	.60	0	.75	.20	.75	.70
1990	.55	0	.75	.20	.75	.70
1991	.50	0	.75	.20	.75	.70
1992	.45	0	.70	.20	.75	.70
1993	.40	0	.65	.20	.75	.70
1994	.35	0	.60	.20	.75	.70
1995	.30	0	.55	.20	.75	.70
1996	.25	0	.50	0	.75	.70
1997	.25	0	.50	0	.75	.70
1998	.25	0	.50	0	.75	.70
1999	.25	0	.50	0	.75	.70
2000	.25	0	.50	0	.75	.70

APPENDIX D

Labour Force Projections Based on
1984 Participation Rates

<u>Year</u>	<u>Population Projections</u>		<u>Optimistic</u>
	<u>Present Levels</u>	<u>Most Likely</u> (000)	
1984	221	221	221
1985	224	224	224
1986	228	228	228
1987	230	231	231
1988	233	233	234
1989	235	236	237
1990	238	239	241
1991	240	242	244
1992	242	244	247
1993	243	246	249
1994	244	248	252
1995	244	250	254
1996	245	251	257
1997	246	253	260
1998	246	255	263
1999	247	256	266
2000	247	258	268

(Appendix D Cont'd)

Labour Force Projections

Year	<u>Present Levels</u>		<u>Most Likely</u>		<u>Optimistic</u>	
	<u>1</u>	<u>2</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>2</u>
	(000)					
1984	221	221	221	221	221	221
1985	224	224	224	224	224	224
1986	230	230	230	230	230	230
1987	236	236	236	236	237	236
1988	241	241	242	241	242	242
1989	247	246	248	247	249	248
1990	252	252	254	253	255	254
1991	257	256	259	258	261	260
1992	261	261	264	264	267	266
1993	265	265	269	269	272	272
1994	269	269	273	274	278	278
1995	272	273	278	279	284	284
1996	276	277	283	284	290	291
1997	279	281	288	289	296	297
1998	283	285	292	294	302	304
1999	286	289	297	300	308	310
2000	289	292	301	305	314	317

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- 1) Newfoundland Male & Female Participation Rates moving to Canadian Rate over twenty years.
 - 2) Newfoundland Male Participation Rate fixed at 1984 level and Newfoundland Female Participation Rate increasing to Newfoundland Male Rate over twenty years.

APPENDIX E

Population Forecast by Age and Sex

Low, Medium & High Projections

LOW

PRESENT LEVELS - MALE

	15-24	25-34	35-44	45-54	55-64	65+	15+	SUM15+
1984	30	40	32	20	12	1		135
1986	29.7	40.5	34.9	21.1	12.0	1.1		139.2
1987	29.4	40.6	36.3	21.4	12.0	1.1		140.7
1988	28.9	40.7	37.5	21.9	12.1	1.1		142.2
1989	28.0	41.4	38.3	22.7	12.2	1.2		143.7
1990	27.1	42.0	39.2	23.6	12.3	1.2		145.4
1991	26.4	42.3	39.6	24.8	12.3	1.2		146.7
1992	25.8	42.4	39.5	26.3	12.3	1.2		147.6
1993	25.0	42.3	39.4	27.8	12.4	1.2		148.2
1994	24.3	42.3	39.2	29.1	12.6	1.3		148.9
1995	23.6	42.0	39.3	30.5	12.7	1.3		149.5
1996	22.8	41.7	39.2	31.9	12.9	1.3		149.8
1997	22.2	41.2	39.4	33.1	13.1	1.3		150.3
1998	21.7	40.4	39.6	34.2	13.5	1.3		150.7
1999	21.4	38.9	~~40.2~~	35.1	14.0	1.3		150.9
2000	21.0	37.5	40.8	35.8	14.5	1.3		151.0

LOW

ESTIMATES:
LABOUR FORCE

PRESENT LEVELS - FEMALE

	15-24	25-34	35-44	45-54	55-64	65+	15+ SUM15+
1984	26	27	19	10	4	1	86
1986	25.5	28.3	21.5	10.4	4.1	0.5	90.3
1987	25.5	28.9	23.0	11.0	4.4	0.6	93.3
1988	25.2	29.7	24.2	11.7	4.7	0.6	96.1
1989	24.7	30.4	25.5	12.5	4.9	0.6	98.8
1990	24.1	31.2	26.8	13.3	5.2	0.7	101.3
1991	23.4	31.9	27.5	14.4	5.4	0.7	103.4
1992	22.9	32.3	28.2	15.6	5.6	0.8	105.4
1993	22.3	32.6	28.9	16.8	5.8	0.8	107.1
1994	21.7	32.7	29.3	17.9	6.1	0.8	108.4
1995	21.1	32.7	29.6	19.1	6.3	0.8	109.6
1996	20.6	32.7	30.0	20.3	6.5	0.9	110.8
1997	20.0	32.5	30.4	21.4	6.7	0.9	111.9
1998	19.6	32.1	30.7	22.4	7.1	0.9	112.8
1999	19.2	31.5	31.3	23.4	7.5	0.9	113.8
2000	19.0	30.5	32.0	24.4	7.9	1.0	114.7

LOW

ESTIMATES:
LABOUR FORCE

PRESENT LEVELS - TOTAL

	15-24	25-34	35-44	45-54	55-64	65+	15+	SUM15+
1984	56	68	51	30	16	2		221
1986	55.2	68.7	56.4	31.5	16.1	1.6		229.5
1987	54.8	69.5	59.2	32.4	16.4	1.7		234.0
1988	54.1	70.4	61.7	33.6	16.8	1.8		238.3
1989	52.7	71.8	63.8	35.2	17.1	1.8		242.4
1990	51.2	73.2	66.0	36.9	17.5	1.9		246.7
1991	49.8	74.2	67.1	39.2	17.7	1.9		250.1
1992	48.6	74.7	67.7	41.9	17.9	2.0		252.9
1993	47.3	75.0	68.3	44.6	18.2	2.0		255.3
1994	46.0	75.0	68.5	47.0	18.7	2.1		257.3
1995	44.8	74.7	68.9	49.6	19.0	2.1		259.1
1996	43.4	74.3	69.2	52.2	19.3	2.2		260.6
1997	42.2	73.7	69.8	54.5	19.8	2.2		262.2
1998	41.3	72.5	70.3	56.6	20.6	2.2		263.5
1999	40.6	70.4	71.5	58.4	21.5	2.2		264.7
2000	40.0	68.0	72.8	60.2	22.4	2.3		265.7

MEDIUM

ESTIMATES:
LABOUR FORCE

MOST LIKELY - MALE

	15-24	25-34	35-44	45-54	55-64	65+	15+	SUM15+
1984	30	40	32	20	12	1		135
1986	29.9	40.6	34.9	21.1	12.1	1.1		139.7
1987	29.9	40.7	36.4	21.5	12.1	1.2		141.8
1988	29.8	41.1	37.6	22.0	12.2	1.3		143.9
1989	29.2	41.9	38.5	23.0	12.4	1.3		146.4
1990	28.7	42.7	39.6	23.9	12.6	1.4		148.8
1991	28.3	43.3	40.0	25.3	12.7	1.4		150.9
1992	28.0	43.6	40.2	26.7	12.7	1.5		152.7
1993	27.5	44.0	40.2	28.3	12.8	1.6		154.4
1994	27.0	44.3	40.2	29.6	13.2	1.6		156.0
1995	26.6	44.4	40.4	31.2	13.4	1.7		157.8
1996	25.8	44.5	40.5	32.6	13.6	1.7		158.7
1997	25.2	44.4	40.9	33.9	13.9	1.7		160.0
1998	24.7	44.1	41.2	35.0	14.2	1.7		160.9
1999	24.5	43.1	42.1	35.9	14.8	1.8		162.2
2000	24.1	42.1	42.8	36.9	15.4	1.8		163.0

MEDIUM

ESTIMATES:
LABOUR FORCE

MOST LIKELY - FEMALE

	15-24	25-34	35-44	45-54	55-64	65+	15+	SUM15+
1984	26	27	19	10	4	1		86
1986	25.6	28.3	21.5	10.4	4.1	0.5		90.4
1987	25.6	29.0	23.0	11.0	4.4	0.6		93.6
1988	25.4	29.8	24.3	11.8	4.7	0.6		96.7
1989	25.0	30.7	25.8	12.7	5.1	0.7		99.9
1990	24.5	31.7	27.2	13.6	5.4	0.7		103.1
1991	24.0	32.7	28.1	15.0	5.7	0.8		106.2
1992	23.6	33.4	29.0	16.3	6.0	0.8		109.2
1993	23.1	34.1	29.9	17.7	6.4	0.8		112.0
1994	22.6	34.5	30.7	19.0	6.7	0.9		114.5
1995	22.2	35.0	31.2	20.5	7.1	0.9		116.9
1996	21.7	35.3	32.0	22.0	7.4	1.0		119.3
1997	21.3	35.7	32.7	23.4	7.8	1.0		121.8
1998	20.9	35.7	33.4	24.7	8.3	1.0		124.1
1999	20.7	35.5	34.3	26.0	8.9	1.1		126.5
2000	20.5	34.9	35.4	27.3	9.5	1.1		128.8

MEDIUM

ESTIMATES:
LABOUR FORCE

MOST LIKELY - TOTAL

	15-24	25-34	35-44	45-54	55-64	65+	15+	SUM15+
1984	56	68	51	30	16	2		221
1986	55.5	68.9	56.4	31.5	16.2	1.7		230.1
1987	55.5	69.7	59.4	32.5	16.5	1.8		235.4
1988	55.2	70.8	61.9	33.8	17.0	1.9		240.6
1989	54.2	72.6	64.3	35.7	17.5	2.0		246.3
1990	53.2	74.4	66.7	37.5	18.0	2.1		251.9
1991	52.2	76.0	68.1	40.2	18.4	2.2		257.1
1992	51.5	77.1	69.2	43.0	18.8	2.3		261.9
1993	50.6	78.1	70.1	46.1	19.2	2.4		266.5
1994	49.7	78.9	70.9	48.7	19.9	2.5		270.5
1995	48.8	79.4	71.7	51.7	20.5	2.6		274.7
1996	47.4	79.8	72.5	54.6	21.0	2.7		278.0
1997	46.5	80.1	73.6	57.3	21.6	2.7		281.8
1998	45.7	79.8	74.6	59.7	22.5	2.8		285.0
1999	45.2	78.6	76.5	62.0	23.7	2.8		288.7
2000	44.6	77.0	78.2	64.2	24.8	2.9		291.8

HIGH

ESTIMATES:
LABOUR FORCE

OPTIMISTIC - MALE

	15-24	25-34	35-44	45-54	55-64	65+	15+	SUM15+
1984	30	40	32	20	12	1		135
1986	30.5	40.8	35.1	21.2	12.2	1.2		140.9
1987	31.1	41.3	36.7	21.7	12.4	1.4		144.5
1988	31.4	41.8	38.2	22.3	12.7	1.6		148.0
1989	31.5	42.9	39.4	23.4	13.0	1.7		151.9
1990	31.4	44.1	40.6	24.4	13.3	1.9		155.6
1991	31.6	45.1	41.3	25.9	13.5	2.1		159.4
1992	31.7	45.8	41.7	27.7	13.7	2.2		162.9
1993	31.7	46.7	42.0	29.5	14.1	2.4		166.4
1994	31.7	47.6	42.4	31.0	14.5	2.6		170.0
1995	31.7	48.2	43.0	32.7	14.9	2.8		173.3
1996	31.4	48.5	43.1	34.3	15.1	2.8		175.3
1997	31.2	48.7	43.4	35.8	15.5	2.8		177.4
1998	31.2	48.5	43.9	37.1	16.0	2.9		179.5
1999	31.4	47.5	44.9	38.1	16.5	2.9		181.3
2000	31.5	46.7	45.7	39.1	17.2	2.9		183.2

HIGH

OPTIMISTIC - FEMALE

	15-24	25-34	35-44	45-54	55-64	65+	15+	SUM15+
1984	26	27	19	10	4	1		86
1986	25.6	28.3	21.5	10.4	4.1	0.5		90.4
1987	25.6	29.0	23.0	11.0	4.4	0.6		93.7
1988	25.5	29.9	24.3	11.8	4.7	0.6		96.9
1989	25.1	30.9	25.8	12.7	5.1	0.7		100.2
1990	24.6	31.9	27.3	13.6	5.4	0.7		103.6
1991	24.2	33.0	28.3	15.0	5.8	0.8		107.0
1992	23.9	33.9	29.3	16.3	6.1	0.8		110.3
1993	23.4	34.8	30.4	17.8	6.4	0.9		113.7
1994	23.1	35.6	31.3	19.3	6.9	0.9		117.1
1995	22.7	36.4	32.2	21.0	7.3	1.0		120.6
1996	22.5	37.0	33.1	22.8	7.7	1.0		124.2
1997	22.5	37.8	34.1	24.5	8.3	1.1		128.1
1998	22.4	38.1	35.1	26.1	8.9	1.1		131.7
1999	22.5	38.0	36.3	27.7	9.7	1.2		135.4
2000	22.7	37.8	37.6	29.4	10.4	1.2		139.2

HIGH

ESTIMATES:
LABOUR FORCE

OPTIMISTIC - TOTAL

	15-24	25-34	35-44	45-54	55-64	65+	15+	SUM15+
1984	56	68	51	30	16	2		221
1986	56.0	69.1	56.6	31.6	16.3	1.8		231.3
1987	56.7	70.3	59.7	32.7	16.8	2.0		238.2
1988	56.9	71.7	62.5	34.1	17.4	2.2		244.8
1989	56.6	73.8	65.1	36.1	18.1	2.4		252.1
1990	56.1	76.0	67.9	38.0	18.8	2.6		259.2
1991	55.8	78.1	69.6	40.9	19.3	2.8		266.4
1992	55.6	79.8	71.0	44.0	19.8	3.0		273.2
1993	55.1	81.5	72.4	47.3	20.5	3.3		280.1
1994	54.8	83.3	73.7	50.3	21.4	3.5		287.0
1995	54.4	84.6	75.1	53.7	22.3	3.7		293.9
1996	53.9	85.5	76.3	57.1	22.9	3.8		299.4
1997	53.7	86.4	77.5	60.3	23.7	3.9		305.5
1998	53.6	86.6	79.0	63.2	24.8	4.0		311.2
1999	54.0	85.5	81.2	65.8	26.2	4.0		316.7
2000	54.2	84.5	83.4	68.5	27.6	4.1		322.3

APPENDIX F

Low Labour Force Projection

Participation Rates

Newfoundland

1984 to 2000

<u>Year</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>
1984	65.0	41.0	52.9
1985	65.0	41.0	52.9
1986	64.9	41.4	53.1
1987	65.0	42.3	53.5
1988	65.1	43.0	54.0
1989	65.4	43.8	54.4
1990	65.7	44.5	55.0
1991	65.9	45.0	55.3
1992	66.0	45.5	55.6
1993	66.0	46.0	55.8
1994	66.2	46.3	56.1
1995	66.3	46.6	56.2
1996	66.4	46.9	56.4
1997	66.4	47.1	56.5
1998	66.4	47.2	56.6
1999	66.5	47.5	56.7
2000	66.4	47.6	56.7

Medium Labour Force Projection

Participation Rates

Newfoundland

1984 to 2000

<u>Year</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>
1984	65.0	41.0	52.9
1985	65.0	41.0	52.9
1986	65.1	41.5	53.2
1987	65.4	42.4	53.8
1988	65.7	43.2	54.3
1989	66.3	44.1	55.1
1990	66.8	45.1	55.8
1991	67.2	46.0	56.4
1992	67.4	46.8	57.0
1993	67.8	47.6	57.6
1994	68.2	48.3	58.0
1995	68.5	48.9	58.5
1996	68.5	49.5	58.8
1997	68.6	50.1	59.2
1998	68.6	50.7	59.5
1999	68.8	51.3	59.8
2000	68.7	51.9	60.1

High Labour Force Projection

Participation Rates

Newfoundland

1984 to 2000

<u>Year</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>
1984	65.0	41.0	52.9
1985	65.0	41.0	52.9
1986	65.7	41.5	53.5
1987	66.6	42.4	54.3
1988	67.4	43.2	55.2
1989	68.6	44.1	56.2
1990	69.5	45.1	57.1
1991	70.4	46.0	58.1
1992	71.3	46.9	58.9
1993	72.2	47.8	59.8
1994	73.1	48.8	60.7
1995	73.8	49.7	61.6
1996	74.0	50.6	62.1
1997	73.9	51.6	62.6
1998	74.0	52.4	63.1
1999	74.0	53.3	63.5
2000	74.0	54.3	63.9
